

CLAIMS

What is claimed is:

1. A lighting installation comprising an electrical power supply line (3) and at least one lighting device (21A; 21B; 21C) with controllable light emission, connected to said electrical power supply line (3), characterized in that:

- said at least one lighting device is associated with a control unit (25A, 25B, 25C) comprising a device (30) for receiving data transmitted along said electrical power supply line (3) and devices (41; 60) for generating a light emission regulation signal;
- said electrical power supply line is connected to a controller (27) with a means (83) of transmitting data toward the control unit (25A, 25B, 25C); and
- said controller is programmed to send at least one data element to the control unit for regulating the emission of the corresponding lighting device.

2. Installation according to claim 1, characterized in that said transmission device (83) and said receiving device or devices (30) comprises a modem (PLM) for transmitting and receiving data by carrier frequency transmission along said electrical power supply line (3).

3. Installation according to claim 1 or 2, characterized in that said lighting device (21A, 21B, 21C) comprises a power supply circuit (23A, 23B, 23C) with a light intensity regulator for at least one corresponding lamp (22A, 22B, 22C), said power supply circuit having electrical power supply terminals (D2, E2) and regulation

terminals (F2, G2) for a light emission regulation signal, said regulation terminals being connected to said control unit (25A, 25B, 25C).

4. Installation according to claim 1 or 2 or 3, characterized in that said at least one lighting device (21A, 21B, 21C) is associated with an on-off switch (24A, 24B).

5. Installation according to claims 3 and 4, characterized in that said power supply circuit (23A, 23B, 23C) is connected, by means of said electrical power supply terminals (D2, E2), to the electrical power supply line (3), said switch (24A, 24B) being connected between one of said terminals and said line (3).

6. Installation according to claim 1 or 2 or 3, characterized in that said controller is programmed and can be commanded to send an additional data element for on-off switching to the control unit (25A, 25B, 25C) of said at least one lighting device (21A, 21B, 21C).

7. Installation according to claim 6, characterized in that said control unit (25A, 25B, 25C) contains on-off switching means (55).

8. Installation according to claims 3 and 7, characterized in that said power supply circuit (23A, 23B, 23C) is connected to the control unit (25A, 25B, 25C) by means of said electrical power supply terminals (D2, E2) and by means of said regulation terminals (F2, G2), said control unit (25A, 25B, 25C) having terminals (A1, B1) for connection to the electrical power supply line and terminals (D1, E1) for the electrical power supply to the power supply device.

9. Installation according to claim 8, characterized in that at least one of said electrical power supply terminals (D2, E2) of the power supply circuit (23A, 23B, 23C) is connected to the on-off switching means (55) of the control unit (25A, 25B, 25C).

10. Installation according to one or more of the preceding claims, characterized in that said control unit comprises a microprocessor (41) connected to said receiving device (30).

11. Installation according to at least claims 7 and 10, characterized in that said on-off switching means (55) are controlled by a signal generated by said microprocessor (41) according to the commands received by said receiving device (30).

12. Installation according to claim 10, characterized in that said microprocessor (41) is programmed to generate a signal for regulating the light intensity of the lamp (22A, 22B, 22C) of the lighting device.

13. Installation according to one or more of the preceding claims, characterized in that said control unit (25A, 25B, 25C) comprises regulation terminals (F1, G1) for a light emission regulation signal, galvanically isolated from the electrical power supply line (3).

14. Installation according to one or more of the preceding claims, characterized in that said control unit (25A, 25B, 25C) comprises means (43, 45, 47, 41) for detecting the correct operation of the lighting device (21A, 21B, 21C) associated with it.

15. Installation according to one or more of the preceding claims, characterized in that said controller (27) comprises a microprocessor (81) and is programmed to transmit to the controller data on the correct operation or the presence of a fault in said lighting device.

16. Installation according to one or more of the preceding claims, characterized in that said controller (27) comprises a user interface (87) for modifying at least one control variable.

17. Installation according to one or more of the preceding claims, characterized in that said control unit (25A, 25B, 25C) comprises a microprocessor (41) and a memory containing data relating to the on-off switching and/or luminous flux regulation timetables of the corresponding lighting device; in that said controller (27) is programmed to send data on the current timetable along said power supply line (3); and in that said microprocessor compares the data received along the power supply line (3) with said data for commanding the switching on and/or off and/or the regulation of the flux of the corresponding lighting device.

18. A control unit (25A, 25B, 25C) for a lighting device (21A, 21B, 21C) of the type whose light emission can be regulated, characterized in that it comprises, in combination: terminals (A1, B1) for connection to an electrical power supply line; a device (30) for receiving data transmitted along said electrical power supply line (3); regulation terminals (F1, G1) for a light emission regulation signal; and devices (41, 60) connected to said regulation terminals, for generating a light emission regulation signal for said lighting device.

19. Control unit according to claim 18, characterized in that it additionally comprises terminals (D1, E1) for the output of a supply voltage for said lighting device.

20. Control unit according to claim 18 or 20, characterized in that said receiving device (30) comprises a modem (PLM) for transmitting and receiving data by carrier frequency transmission along said electrical power supply line (3).

21. Control unit according to claim 18, 19 or 20, characterized by means (55) of switching the lighting device on and off.

22. Control unit according to one or more of claims 18 to 21, characterized by a microprocessor (41) connected to said receiving device (30).

23. Control unit according to at least claims 21 and 22, characterized in that said on-off switching means (55) are controlled by a signal generated by said microprocessor (41) according to commands received by said receiving device (30).

24. Control unit according to claim 22 or 23, characterized in that said microprocessor is programmed to generate said light intensity regulation signal.

25. Control unit according to claim 22, 23 or 24, characterized in that it comprises a memory containing data relating to a timetable for the switching on and off and/or for the regulation of the luminous flux of the lighting device associated with said control unit, and in that said microprocessor is programmed to compare said data with a time signal received from the power supply line (3).

26. Control unit according to one or more of claims 18 to 25, characterized in that said regulation terminals (F1, G1) are galvanically isolated from the electrical power supply line (3).

27. Control unit according to one or more of claims 18 to 26, characterized by means (43, 45, 47, 41) for detecting the correct operation of the lighting device (21A, 21B, 21C) associated with it.

28. A controller (27) for a lighting installation comprising lighting devices with regulation of the light emission, characterized in that it comprises: terminals for connection to an electrical power supply line (3); a device (83) for transmitting data along said electrical power supply line; and a microprocessor (81) for controlling the sending of data along said power supply line toward lighting devices supplied by said electrical power supply line.

29. Controller according to claim 28, characterized in that said data transmission device is a modem for transmitting and receiving data by carrier frequency transmission along said electrical power supply line.

30. Controller according to claim 28 or 29, characterized in that said microprocessor is programmed to send commands for the regulation of the light emission of one or more lighting devices.

31. Controller according to claim 28, 29 or 30, characterized in that said microprocessor is programmed to send commands for switching on and off one or more lighting devices.

32. Controller according to one or more of claims 28 to 31, characterized in that it comprises a user interface (81).

33. Controller according to one or more of claims 28 to 32, characterized in that it is programmed to send a time signal along said power supply line (3).